

CLAIMS

1. Device for positioning an optical pickup unit (10) of an optical drive in a predetermined drive position, said device comprising:
 - 5 - a linear drive motor (16);
 - a follower (12) coupled to said optical pickup unit (10) and cooperatively engaged with said motor (16), such that operation of said motor (16) causes linear movement of said follower (12) and optical pickup unit (10) during normal operation;
 - a stop member (26) arranged and configured such that during normal operation of said optical drive, movement of said follower (12) is permitted by said stop member (26); and
 - locking means (16,18,28a-28b) for causing movement of said follower (12) relative to said stop member (26) at said predetermined drive position to a locked position in which movement thereof is restricted or prevented by said stop member (26).
- 15 2. Device according to claim 1, wherein said motor (16) comprises an elongate lead screw (14) having a spiral groove (20) defining a thread along at least a portion of its length, the follower (12) comprising at least one projection (18) which engages with the groove (20), whereby operation of the motor (16) causes rotation of the lead screw (14) and corresponding linear movement of the follower (12).
- 20 3. Device according to claim 2, wherein said lead screw (14) is provided with at least one intermediate groove (28a,28b) in a body portion of the lead screw (14) between two adjacent, longitudinally spaced portions of the spiral groove (20), the at least one projection (18) of said follower (12) being caused to engage with the at least one intermediate groove (28a,28b) so as to effect the locked position.
- 25 4. Device according to claim 1, wherein said motor (16) is mounted on a bracket (22) having a base plate (23), the stop member (26) projecting upwardly from the plane of the base plate (23).
- 30 5. Device according to claim 4, wherein said stop member is formed integrally with said base plate (23).

6. Device according to claim 4, wherein said bracket (22) comprises an end wall (24) spaced from the stop member (26) such that in the locked position, the follower (12) is trapped between the end wall (24) and the stop member (26).

5 7. Device according to claim 1, wherein the locking means are arranged and configured such that movement of the follower (12) relative to the stop member (26) in order to effect said locked position is in a direction substantially perpendicular to the direction of linear movement (A) of the follower (12) during normal operation.

10 8. Device according to claim 1, wherein movement of said follower (12) to said locked position is effected by linear movement of the follower (12) from a first position to a second, locked position.

9. Device according to claim 1, wherein movement of said follower (12) into and
15 out of said locked position is effected by electrical control of said motor (16);

10. An optical drive comprising:

- an optical pickup unit (10);
- a linear drive motor (16);

20 - a follower (12) coupled to said optical pickup unit (10) and cooperatively engaged with said motor (16), such that operation of said motor (16) causes linear movement of said follower (12) and optical pickup unit (10) during normal operation;

- a stop member (26) arranged and configured such that during normal operation of said optical drive, movement of said follower (12) is permitted by said stop member (26); and

25 - locking means (16,18,28a-28b) for causing movement of said follower (12) relative to said stop member (26) at a predetermined drive position to a locked position in which movement thereof is restricted or prevented by said stop member (26).